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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,814	03/19/2004	Andrew A. Frank	UC03-084-3	7074

8156 7590 07/27/2005

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EXAMINER

LEWIS, TISHA D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/804,814

Applicant(s)

FRANK ET AL.

Examiner

TISHA D. LEWIS

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

The following is a first action on the merits of application serial no. 10/804,814 filed on March 19, 2004.

#### ***Claim Objections***

Claims 7-10 are objected to because of the following informalities:

-In claim 7, line 7, -to- should be inserted after "relating".

-In claims 8-10, the word "second" should be changed to -secondary-.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13 are rejected under 35 U.S.C. 102(b) as being unpatentable by WO 01/20198 A1. WO discloses a control system for a continuously variable transmission having a programmable controller (17-19), means associated with the controller for mapping rate of change of ratio to clamping pressure between the pulleys of the CVT (clms 3-5, Figure 4 (algorithm or map), a hydraulic servo control system (15, 16, 20, 21) controlled by the controller and controlling clamping pressure of the CVT, achieving a desired rate of change in ratio of the CVT (ROC), achieving a commanded clamping pressure (Pf, Ps) in response to an input torque (Tp) and a commanded ratio rate (RC) based on a mapping of empirical data pertaining to pressure (cylinder pressure), ratio

rate (pulley ratio) and torque (transmission torque), controlling the ratio rate and clamping pressure based on a ratio map (mapping of ratio rate above), and transmitting a given amount of torque ( $T_t$ ) according to the map (Figure 4).

Claims 1-4 and 13 are rejected under 35 U.S.C. 102(b) as being unpatentable by Ito ('110). Ito discloses a control system for a continuously variable transmission having a programmable controller (60), means associated with the controller for mapping rate of change of ratio to clamping pressure between the pulleys of the CVT (Figure 7), a hydraulic servo control system (56) controlled by the controller and controlling clamping pressure of the CVT.

Claims 1-4 and 7-13 are rejected under 35 U.S.C. 102(b) as being unpatentable by Abo et al ('638). Abo et al discloses a control system for a continuously variable transmission having a programmable controller (12, 13, 16, 18), means associated with the controller for mapping rate of change of ratio to clamping pressure between the pulleys of the CVT (14 with 11 and 17), a hydraulic servo control system (4-7) controlled by the controller and controlling clamping pressure of the CVT, achieving a commanded clamping pressure in response to an input torque and a commanded ratio rate based on a mapping of empirical data pertaining to pressure, ratio rate and torque (11 and 17), controlling the ratio rate and clamping pressure based on a ratio map (mapping of ratio rate above), and transmitting a given amount of torque (11 and 17) according to the map.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frank ('844) in view of WO. Frank discloses a hybrid electric vehicle having a continuously variable transmission (18), an internal combustion engine (10) coupled to the CVT, an electric motor (24) coupled to an output of the engine, a system controller (30) controlling the motor, engine and rate of change of ratio of the CVT varying an acceleration (via 32) and deceleration (via 34) by varying motor torque (42) and rate of change of ratio (44), but does not disclose mapping a rate of change of ratio to clamping pressure and the remaining limitations used for this in claims 1-13.

WO discloses a control system for a continuously variable transmission having a programmable controller (17-19) and means associated with the controller for mapping rate of change of ratio to clamping pressure between the pulleys of the CVT and the remaining limitations of claims 1-13 as disclosed above.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Frank with a mapping rate of change ratio to clamping pressure in view of WO to prevent slipping of the drive belt.

### FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326 before final and 703-872-9327 after final**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

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\_\_\_\_\_

\_\_\_\_\_

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

### Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Frank ('534).

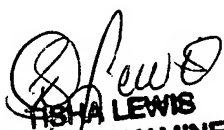
Art Unit: 3681

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-Thur 6 AM TO 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tdl  
July 24, 2005

  
TISHA LEWIS  
PRIMARY EXAMINER  
Hu 3681 7/24/05